a plurality of holes for passing process gases to the semiconductor processing chamber; and

a portion having a machined surface exposed to the process chemistry used in the semiconductor fabrication apparatus, wherein the portion of the gas distribution plate has substantially no micro-defects about 50 micrometers or greater.

12. (Twice Amended) A plasma-based fabrication apparatus, comprising:
a plasma chamber that receives process gases and forms a plasma therefrom;
and

a gas distribution plate including a plurality of holes that supply the process gases into said plasma chamber, a portion of said gas distribution plate having a machined surface and being exposed to the process chemistry used in said plasma chamber, wherein the portion of the gas distribution plate has substantially no microdefects about 50 micrometers or greater and wherein said gas distribution plate is pretreated by heating at a controlled temperature between about 1500 degrees Celsius to 1600 degrees Celsius for a prolonged time.

Please cancel claims 15-17.

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18. (Once Amended) A plasma-based fabrication apparatus as recited in claim 12 wherein the prolonged time is from about 5 to 10 hours.